

## Philippine Spurdog, *Squalus montalbani*

Report Card assessment	Recovering		
IUCN Red List Australian Assessment	Refer to Global Assessment	IUCN Red List Global Assessment	Vulnerable
Assessors	White, W.T. & Graham, K.J.		
Report Card Remarks	In Australia, management measures in place to promote recovery, and low threat level across most of the Australian range		

### Summary

The Philippine Spurdog is a medium sized deepwater dogfish that occurs in warm-temperate to tropical Australia and the Philippines, Taiwan and Indonesia. It is captured in trawl and longline fisheries and is susceptible to overfishing as it likely has low biological productivity characteristic of deepwater *Squalus* species. Dramatic



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population declines in abundance have occurred in trawled areas of southern New South Wales. Management measures have been implemented to promote recovery of deepwater dogfish in the area. The species has also been reported in large numbers at some landing sites from which unregulated deepwater fisheries operate in Indonesia, the Philippines and Taiwan. There is strong anecdotal evidence from the Philippines of serious declines in deepwater dogfish landings (including Philippine Spurdog) after approximately 10 years of targeted fishing. In Australia, there is a considerable proportion of its range with light or absent fishing pressure and the deeper portions of its depth range may provide refuge from fishing. Therefore, it is assessed as Vulnerable (IUCN) and in Australia, Transitional Recovering (SAFS).

### Distribution

The Philippine Spurdog occurs across the Eastern Indian Ocean and western central Pacific. It is found in the Philippines, Indonesia and Taiwan (Ebert et al. 2013, Last and Stevens 2009). In Australia, it occurs from Flinders Reef (Queensland) to Terrigal (New South Wales) and off the west coast from the Timor Sea to Rottnest Island (Last et al. 2007).

### Stock structure and status

Off southeast Australia, dramatic declines have been recorded of approximately 97% due to upper slope trawling off central and southern New South Wales (NSW) (Graham et al. 2001). Trawling continues in the Southern and Eastern Scalefish and Shark Fishery (SESSF) but this represents a very small part of the species' overall range. A ban on trawling below 700 m was implemented in the SESSF

(AFMA 2006), though as this species occurs to 670 m in Australia, the ban would not have protected the Philippine Spurdog in that part of its range. A plan of management was later implemented with catch limits and spatial and depth closures to promote recovery of the overfished dogfish populations, with recovery estimated to take many decades (AFMA 2012). There is relatively little fishing effort in deepwater off northern NSW and Queensland, though the Philippine Spurdog may be taken in very low numbers in the deepwater line fishery in Southern Queensland (Sumpton et al. 2013). Deepwater fishing effort is also very low off Western Australia, suggesting that outside southeast Australia, the threat levels are low through most of the Philippine Spurdog's Australian range.

## Fisheries

The primary threat to the Philippine Spurdog is fishing. The species is taken as bycatch in mostly deepwater trawl fisheries and in some line fisheries. It is bycatch in the trawl sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF). Outside of Australia, it is reportedly taken in relatively unmanaged deepwater demersal longline fisheries off Indonesia, Taiwan and the Philippines (Graham et al. 2001, White 2009, Sembiring et al. 2015).

## Habitat and biology

The Philippine Spurdog is mostly demersal on the continental slope. In Australia, it is reported from 295 to 670 m (Last and Stevens 2009) and from 154 to 1,370 m in Indonesian waters (White et al. 2006), although unlikely to exceed 1,000 m. The species known maximum size is 111 cm total length (TL) and maximum age 28 years with males mature at 22 years and females at 26 years (Rigby et al. 2015).

Longevity and maximum size	Longevity: at least 28 years Max size: 111 cm TL
Age and/or size at maturity (50%)	Males: ~22 years, 62-70 cm TL Females: ~26 years, 80-85 cm TL

**Link to IUCN Page:** <http://www.iucnredlist.org/details/161404/0>

**Link to page at Shark References:** <http://shark-references.com/species/view/Squalus-montalbani>

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